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THE NEW ENGLAND Journal of Dentistry.

CONDUCTED BY ASSOCIATED DENTISTS.

Vol. 2. APRIL, 1883. No. 4.

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PUBLISHED MONTHLY BY
THE NEW ENGLAND JOURNAL COMPANY,
SPRINGFIELD, MASS.

Terms: Two Dollars per Year, in advance. Single Copies, 25 Cents.
Foreign Subscriptions, $2 25.

[Entered at the Post Office, Springfield, as second-class matter.]

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OUR GUM COLOR IS THE MOST LIFE-LIKE.

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OUR ENAMELS, COLORS AND SHADES APPROACH NATURE SO CLOSELY THAT IT IS IMPOSSIBLE TO DETECT THEM.

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620 Race Street, Philadelphia; 514 Wabash Avenue, Chicago.

THE

NEW ENGLAND

Journal of Dentistry.

Vol. II. APRIL, 1883. No. 4.

ORIGINAL COMMUNICATIONS.

RIGHTS OF DENTAL SURGEONS TO EXEMPTION FROM JURY DUTY.

The following copies of papers now before the Supreme Court of the District of Columbia will perhaps sufficiently explain themselves. The facts which brought about this stage of the case are, if we are correctly informed, as follows:

Dr. Noble was summoned as a "talesman" by the marshal of the District. The judge having refused to excuse him upon the statement that he is a dental surgeon, the following "motion" and "affidavit" were presented, and after a cursory examination of the affidavit, the court expressed a willingness to excuse the Doctor, and refused to fine him.

Acting by advice of counsel and the Washington Dental Society, Dr. N. refused to be excused, and had the case referred to the Court in General Term. Its strength as set forth by "affidavit" and "letter of counsel" seems conclusive, and Dr. Noble and the Washington Dental Society will have earned the gratitude of the profession if they succeed in establishing a governing precedent, something which thus far seems to be wanting.

The question may arise as to whether non-graduates are, or can be, included. It occurs to us that in the several states where the profession has no *special* legal status, the question of what constitutes a

dental surgeon would be determined by common law and would include non-graduates. In those states where special enactments have been secured regulating the practice of dentistry, all whom the law recognizes and licenses as dental surgeons, or dental practitioners, would, by law, have equal claim to exemption from jury duty—if surgeons be by the laws exempt. We give the papers in full, because it is a question of much practical interest to the whole profession, and that dentists may know and be prepared to claim their just rights to exemption as surgeons, with all that the term implies.—Ed.

In the Supreme Court of the District of Columbia.

In re HENRY B. NOBLE. Circuit Court, February, 1883.

MOTION.

Henry B. Noble now comes into this court, this thirteenth day of February, A. D. 1883, and challenges himself as a juror, and moves the court to discharge him from jury duty, on the ground that by the law he is exempt, for the reason that he is a practicing surgeon in the District of Columbia, as shown by the affidavit filed herein, which he tenders himself ready to verify.

HENRY B. NOBLE.

Witness: GEO. F. APPLEBY.

ORDER OF COURT.

In the matter of Henry B. Noble, praying a discharge from jury duty, because he is a dental surgeon, practicing as such, the motion and affidavit in support thereof are hereby respectfully referred to the Court in General Term, there to be heard in the first instance.

MACARTHUR, *Justice.*

AFFIDAVIT OF HENRY B. NOBLE.

This affiant, having been duly sworn according to law, states that he is a resident of the District of Columbia, a citizen of the United States, over twenty-one years of age and under sixty-five years of age, and has never been convicted of any felony or misdemeanor whatever.

This affiant further states, that for more than twenty-five years he has practiced the profession of a dental surgeon and still practices; that he was licensed to practice said profession by the Baltimore College of Dental Surgery, a college chartered in 1839, by an act of the Legislature of the State of Maryland, from which college he was graduated in the year 1857, having pursued the full course of study there prescribed. That he has a diploma of said college admitting

him to the degree (chirurgiæ dentium doctoris) of a doctor of Dental Surgery (D. D. S.) That during the session of 1880 and 1881 of said college he delivered lectures and held clinics. That the *curriculum* of study in said college embraces pathology and therapeutics, anatomy and physiology, chemistry and materia medica, oral surgery and metallurgy, as well as operative and mechanical dentistry. That by said studies a knowledge of the pathological relations of the teeth to the other parts of the system is obtained, together with the symptoms, causes and treatment of all diseases which involve the dental structure, such as inflammatory action affecting the various tissues, diseases of the dental pulp, periodontitis, alveolar abscess, dental exostosis, dental caries, necrosis, &c., &c.; that thereby knowledge is obtained to ensure careful attention to the chemistry of metals, and to the vital chemistry of anæsthetics; that thereby knowledge is obtained so as to construct and apply instruments and appliances for correcting irregularities of the teeth or dental arch, treatment of dislocation and fractures of the maxillæ, removal of morbid growths, treatment of ulceration of the tongue and any disease of the antrum. That the text-books used in said college and in kindred colleges are Garretson's Oral Surgery, Kingsley's Oral Deformities, Harris' Principles and Practice of Dental Surgery, Richardson's Mechanical Dentistry, Gross's System of Surgery, Paget's Surgical Pathology, Miller's Principles of Surgery, Gray's, Wilson's or Handy's Anatomy, Tomes' Dental Anatomy, Dalton's, Flint's, Draper's or Kuss' Physiology, Fowne's, Roscoe's or Wilson's Chemistry, Bowman's Practical Chemistry, Wood's Therapeutics, Biddle's Materia Medica, Wedl's Dental Pathology, Beal on the Microscope, and other works. That for said studies, illustrations are made, both upon the living subject and the cadaver, by dissections of the cadaver, and by diagrams, preparations and models.

This affiant further shows, that he has acquired a large practice in the District of Columbia, and has his time during the hours of the day constantly employed by the very exacting demands of his patients, and sometimes the hours of the night. His patients are oftentimes sufferers from excruciating pain, and require immediate surgical treatment for relief. He has constantly on hand what are called "regulating cases." In these it is necessary for him to see at regular intervals the child or young person whose crooked teeth are being regulated or straightened; in some of these cases daily, and in others two, three, or four times a week. The springs or ligatures which move the teeth towards the position they are designed to occupy, require constant

adjusting, and if they are not regularly attended to the patient suffers materially; and if, by neglect to remove them, the enamel should be softened, great and permanent injury may result. The movement of the teeth having been begun, should go on regularly and uninterruptedly, for if the fixtures are not attended to and altered frequently, so as to keep up the requisite pressure, the teeth will in a short time become more or less fixed and tightened where they are, and renewed movement after a time is not only more difficult, but causes much additional pain and distress to the little patient, the most painful part of the operation being the starting of the movements in the teeth. These cases each range in treatment from one to twelve months.

This affiant further states, that cases are constantly occurring in his practice where arsenic has to be used to devitalize a pulp in order to preserve a tooth. In such cases he is required to see the patient at a certain time after the application is made, in order to remove the arsenic and extirpate the dead pulp. If the arsenic be not removed in due time, the tooth will become discolored and an abscess will most probably result, giving rise not only to great pain and discomfort, but to serious and possibly permanent injury and disfigurement, by resulting necrosis of a portion of the alveoli, or even endangering life through the absorption of pus into the system, causing pyæmia.

This affiant further states, that, being in full practice, he is constantly consulted by patients for the treatment of abscesses occurring at the roots of "dead" teeth, of necrosis of the alveoli or any portion of the maxillæ, for treatment of the disease of the antrum, of ulceration of the tongue, of tumors of the gums, of fractures of the jaw and teeth, and in cases of interrupted second dentition. In the last named cases a reflex constitutional disturbance is oftentimes caused by interrupted second dentition, which is overlooked by the medical attendant, and serious nervous derangements have resulted to the young subjects, which have been rapidly cured by the application of local surgical treatment.

This affiant further states, that fractures of the jaw, though not occurring so frequently as fractures of other bones of the body, are liable to be met with at any time, and, when occurring, require prompt, skillful, and continued treatment; and these cases properly belong to the dental surgeon, who has succeeded in their treatment and cure when the resources of the general surgeon have signally failed, as in the well-known case of the Hon. Wm. H. Seward, who was injured in Washington City whilst Secretary of State.

This affiant further states, that teeth, and especially front ones, are not infrequently loosened, and are sometimes entirely knocked out, by accident. The timely aid and special skill of the dental surgeon can replant the teeth when knocked out and render them permanently firm and useful.

This affiant further states, that hemorrhages, resulting from the particular diathesis of the patient and from other causes, frequently follow the extraction of teeth, sometimes immediately and sometimes after the lapse of hours and days. Secondary hemorrhage, when occurring, is known by physicians and surgeons to be more dangerous than primary, and these cases are always treated by the dental surgeon, as he by his special education and study of the detailed anatomy of these parts, is better qualified for their treatment, and when such cases come to the notice of the physician they are generally referred to the dental surgeon. And this affiant further states, that he has constantly on hand, and there is not a dental surgeon of full practice who has not, cases which require continued and frequent treatment and applications of medicaments for days and weeks, governed by the diathesis and constitutional condition of the patients.

This affiant further states, that he has books and pamphlets in his possession or control, some of which are herewith exhibited and filed, by which, it will appear to the court, that his profession is regarded as an important collateral branch of medical science. That the Universities of Harvard, Pennsylvania, Maryland, Michigan, Iowa, Tennessee, Howard, Vanderbilt, and California have instituted and organized, in connection with their medical departments, departments that are known as Dental Departments, which are now in active operation, and confer the degree of D.D.S.; that the American Medical Association has established a section of dental surgery; that on September 8, 1859, by act of Parliament, power was granted to the Royal College of Surgeons to examine candidates for the diploma of Licentiate in Dental Surgery, and to grant that degree; that in the International Medical Congress there is a section for diseases of the teeth or dental surgery, and that Edwin Saunders, a celebrated dental surgeon, is president of the section; that the Congress has been addressed by various eminent dentists from different parts of the world, and all the proceedings are published in the British Medical Journal.

This affiant further states, that, being a regularly-bred and duly licensed dental surgeon, practicing his profession as such, the performance of jury duty would work material injury to his interests and

injury to many of his patients, and to some of them probably serious injury; that he is advised by counsel for the Washington Dental Society, of which he is a member, after mature deliberation by such counsel, that he is exempt under the law from jury duty. That he is advised by said counsel to assert his privilege by a challenge as well as by a motion, supported by affidavit, as herein done. He appends hereto the letter of said counsel, and the other papers herewith exhibited and filed. That he is informed and believes that this court, Justice Olin presiding, has held that a dental surgeon is exempt by the law from jury duty, the occasion being the summoning of Thomas Oliver Hills, D.D.S., to do jury duty.

This affiant further states that he tenders himself ready to verify all the matters herein stated or in the foregoing motion stated, and that the notice and summons exhibited to the court herewith and hereto appended is the notice and summons served on him as in the motion stated.

HENRY B. NOBLE.

Subscribed and sworn to before me, this 13th day of February, 1883.

R. J. MEIGS, *Clerk*,
By J. J. CAMP, *Asst. Clerk*.

LETTER OF COUNSEL.

WASHINGTON, D. C., *February 10th, 1883*.

Dr. HENRY B. NOBLE.

Dear Sir: As counsel for the Washington Dental Society, we are requested to communicate with you as a member of said society, and to give you the result of our research and investigation as to the question whether a dental surgeon, duly licensed as such by a college having the requisite faculties, or by a university, and practicing his profession in the District of Columbia, is exempt from jury duty in this District. You may remember that the late lamented Judge Olin held, in the case of Dr. Thomas O. Hills, a dental surgeon summoned as a juror, that he was exempt from jury duty. The case is not reported, but you can find from Dr. Hills the occasion of the decision and the reasons given by Judge Olin. Our act of Congress on the subject of exemptions, and the only act of Congress on the subject, was passed June 16th, 1862, just about nine months before the Supreme Court of the District of Columbia was organized. It is incorporated in the Revised Statutes of the United States relating to the

District of Columbia, section 875. It is affirmative legislation, and may not have the effect of repealing prior laws making exemptions not therein mentioned, as in the case of The King vs. Pugh, 1 Douglas, 191, where Lord Mansfield, delivering the opinion of the court, said: "We have considered this matter very fully, and we are all of opinion that the statutes relative to juries, being affirmative, do not take away the prior exemption." The only Maryland acts of Assembly touching exemptions from jury duty, which were passed prior to February, 1801, when Congress passed the act adopting the laws of Maryland then in force, were the acts of 1715, ch. 37, § 4, and 1797, ch. 87, § 6, neither of which related to physicians or surgeons. It is remarked by Chancellor Kilty, of Maryland, in his report to the Maryland Legislatue on the British Statutes, in force in the provinces, page 230, "that the statute of 5 Hen. VIII., chap, 6 (1513), although in its terms applicable only to surgeons of London, is supposed, together with others respecting physicians, to have extended to the kingdom generally." It is stated in 3 Bl. Comm., 364, that the exemption from serving on juries is extended by divers statutes, customs, and charters, to physicians and other medical persons; and Kilty says: "It has not been the practice to summon them on juries in the province or in the state, although they are not exempted by the act of 1715, ch. 37, from which it may be inferred that these statutes extended to the provinces." Chancellor Kilty was the Chief Justice of the Circuit Court of the District of Columbia. His report on the British Statutes existing at the time of the first emigration and by experience found applicable, was printed and distributed under the sanction of the state for the use of its officers, and is a safe guide, says Judge Buchanan, delivering the opinion of the court in Dashiel vs. Attorney-General, 5 Harris & Johnson, p. 403; and Alexander, in his collection of British Statutes in force in Maryland, p. 277, says that surgeons, physicians, and other medical persons are not even exempted from jury service by the Maryland Code, but that they are exempt, as it is presumed, by force of these early statutes. Alexander gives in full the text of act of 5 Henry VIII., cap. VI., as being still in force in Maryland, and thereby surgeons are exempt from jury duty and also barber surgeons. Letters-patent were granted in first year of Edward IV. to the freemen of the mystery of barbers using the mystery or faculty of surgery, by which they became a corporate body. In the 32d year of Henry VIII., as there were two distinct companies in London "occupying and exercising the science and faculty of surgery," the one company

being called "The Barbers of London" and being incorporated, and the other company being called "The Surgeons of London" and not being incorporated, both companies were united and made one body corporate by act of Parliament, 32 Henry VIII., cap. 40, and called by the name of "Masters or Governors of the Mystery and Commonalty of Barbers and Surgeons of London," and they were made exempt from inquest duty. It was enacted by the same act, that "no manner of person within the City of London, suburbs of the same, and one mile compass of the said City of London, . . . shall occupy any surgery, letting of blood, or any other thing belonging to surgery; drawing of teeth only except." And surgeons within the same limits were forbidden to "occupy" or "exercise the feat or craft of barbery or shaving." The said corporation of barbers and surgeons continued until 18 George II., when the surgeons and barbers were made two separate and distinct corporations, reserving the privileges each were entitled to under Stat. 32 Henry VIII., to each company severally, vide Stat. 18 George II., cap. XV.

The barbers continued to have the same privileges after 18 Geo. II. as before, "so far as the same do not concern or relate to the art and science of surgery," and "with respect to everything but surgery." The surgeons so continued to be incorporated till 1800, when the Royal College of Surgeons was established. As the statute of Henry VIII. allowed the barbers to continue in one part of surgery, the drawing of teeth, and prohibited them from practicing every other part of surgery, even treating the diseases of the teeth, the barber, who was a mere tooth-drawer, so far as surgery is concerned, after the act of Henry VIII., chap. 40, was not, it would seem, allowed to practice this part of surgery after the act of George II. for reward or compensation. Thereafter dentistry as a specialty in England arose and has made such wonderful strides that Parliament, in 1859, recognized dentists as surgeons, and granted authority to the Royal College of Surgeons to give diplomas in Dental Surgery. Dentists were not barbers, as has been vulgarly supposed, although barbers were at one time surgeons. The modern dentist was a surgeon from the start and after the surgeon had ceased to be a barber. He draws teeth, it is true, but he draws them very seldom, and only when absolutely necessary. He is not a destroyer or extirpator of teeth. He is a preserver of them, as was the ancient dentist, so intimately acquainted with their structure and organism that he can replant them when necessary, and even transplant teeth from one person to another. He understands

all their diseases and the treatment of them, and all the diseases of the oral cavity and their treatment.

The barber, whilst a mere tooth-drawer in surgery, was exempt from jury duty, and it would seem from Comyn's Digest—Title, Challenge A 4, *in notis* American edition, that as soon as he ceased to do the only surgery allowed him by the act of Henry VIII. (*supra*), to wit: the drawing of teeth, he ceased to be exempt from jury duty. The surgeon was, also, exempt as we have above seen. The policy of the exemption was on account of the inconveniences and possible hurt or even danger to the public by reason of the absence from their professional duties of persons specially skilled in any part of the healing art. The act of George II. exempted surgeons, after their separation from the barbers, from all "parish, ward, and leet offices, and of and from the being put into or serving upon any jury or inquest," and provides that any surgeon summoned and returned to serve on a jury "shall be absolutely discharged from the same," and the return "shall be utterly void and of no effect."

The act of 6 George IV., c. 50, § 2, specifies the persons exempted from jury duty and declares that their names shall not be put upon the jury list, and, among others, "all surgeons being members of one of the royal colleges of surgeons in London, Edinburgh, or Dublin and actually practicing." Now, it was an inconvenience to the public and a hardship on the dental surgeon that he should not be exempt from jury duty when he was recognized by Parliament and by the Royal College of Surgeons as a surgeon, simply because he might not be a member of one of the royal colleges of London, Edinburgh, or Dublin. This patent incongruity in the law was corrected by Parliament by an act passed July 22, 1878, entitled "An act to amend the law relating to dental practitioners." It provides first for the registry of persons qualified to pursue the profession of dentistry, and then enacts as follows: "Every person registered under this act shall be exempt, if he so desires, from serving on all juries and inquests whatsoever, and from serving all corporate, parochial, ward, hundred, and township offices, and from serving in the militia."—(Law Reports, Stat. 13, page 269.) This act clearly shows that dental surgeons are within the classes of persons which it is within the policy of the law to exempt. At the annual meeting of the Metropolitan Counties' Branch of the British Medical Association, held at Crystal Palace in July, 1881, Edwin Saunders was elected president in place of Sir Henry Thompson, and in the course of his address, said: "Concur-

rently with a rapid and brilliant advance in the science and art of dentistry, due to a large extent to a wave of progress which reached this country from America, there arose an increasing demand for and an appreciation of its services on the part of the public." He was speaking of a time before the year 1860, and then speaking of the want felt after that time for a registry as a check to the intrusion of the unprincipled and uninstructed, he says: "This has now been happily accomplished by the dentists' act of 1878, and thus legislative sanction has been obtained for a scheme not directed to give prominence to the educated and qualified few, but to raise the whole body of the profession; not to accentuate the distinctive character of the specialty, but indissolubly to unite it to the great surgical body through the examining board of the Royal College of Surgeons." Dental surgery has a section in the International Medical Congress. It has, also, a section in the American Medical Association. The universities of Maryland, Michigan, Pennsylvania, Iowa, Tennessee, California, Vanderbilt, Howard, and Harvard have organized in connection with their medical departments, as you well know, departments known as dental departments, and confer the degree of D. D. S. We know that in England before 1862, the date of the passage of the act of Congress, the dental surgeon was treated as a surgeon and dental surgery as a branch of surgical practice, and this was due, said Professor Saunders, to "a wave from America." In this country, therefore, prior to 1859, when the act of Parliament was passed giving the Royal College of Surgeons power to grant diplomas in the specialty of dental surgery, the dental surgeon was recognized as one having not only a professional standing, but as having a specialty duly recognized as a part of medical science. In this condition of things the act of Congress of June 16, 1862, was passed, and in 1874, § 875 of the revised Statutes D. C. was enacted, whereby it is provided that all practicing physicians and surgeons shall be exempt from jury duty. Can it be said that a dental surgeon in 1862 or 1874 was not fully recognized in this country as well as in England as a surgeon?

The act says all surgeons shall be exempt. Who is a surgeon? What is a surgeon?

There is a current idea that a surgeon is one who cuts and carves the human frame, and hence the words scalpel of the surgeon are so often found in alliterative company, like the words pallete of the painter, sword of the soldier, or brief of the barrister. The word surgeon does not necessarily imply the idea cutting, for, if so, the lithotritist

would not be a surgeon, although the lithotomist would be and is a a surgeon. The word *surgeon* is derived from the old French *surgien*, which is a contraction or rather corruption of *chirurgien* (the chi being pronounced she in this word in French), which is made up of two Greek roots signifying "hand" and "work," and is applied to one who practices "that part of the healing art which relates to external diseases and their treatment, especially to the manual operations adopted for their cure." (Worcester.) See, also, to the same effect, Webster, Jacob's Tomlin's Law Dictionary, Dunglison's Medical Dictionary and Cooper's Surgical Dictionary. The lithotritist, although he may be a surgeon of greatest skill, is not likely to have the same skill for the diseases of the ear or eye, of the teeth or throat, as the aurist or oculist, as the dentist or laryngoscopist, and is not the less a surgeon because he refers to the laryngoscopist all cases where the throat is diseased, to the dentist, where the teeth or oral cavity are diseased, to the aurist where the ears or contiguous parts are diseased, and to the oculist where the eyes are diseased. If the aurist be a surgeon, and he is so described in the dictionaries, is he less a surgeon because he lets the lithotritist grind a stone or the embryotomist crush a fœtus? If the oculist be a surgeon, and he is so described in the dictionaries, is he less a surgeon because he lets an ovarian tumor be removed by a specialist in that line? If the laryngoscopist be a surgeon, and his cunning is so new that he is not as such mentioned in the dictionaries, is he less a surgeon than his older brother the dentist, who is old enough to be described in the dictionaries, and who is described therein as a surgeon, because the surgery of the teeth and adjacent parts are by him, the laryngoscopist and all the other surgeons, confided to the dentist?

We think the dictionaries well describe aurists, dentists, and oculists to be surgeons. We look at Worcester and we find: Aurist, "a surgeon who treats diseases of the ear;" dentist, "one who devotes himself to the study of the diseases of the teeth and their treatment; a surgeon of the teeth, called also dental surgeon and surgeon dentist;" oculist, "a surgeon who occupies himself chiefly with the management of diseases of the eye."

We think that when the act of Congress says all surgeons shall be exempt, it cannot be successfully maintained that some surgeons are not exempt, and especially that some such surgeons as it is the policy of legislation to exempt, are not exempted. It would have been wiser to particularize the surgeons to be exempted, and select only such

surgeons as have been licensed by some standard college or university, as Parliament has done; but we are dealing with the act as it is, and not as it ought to be. We think that you are exempt, and that His Honor Mr. Justice MacArthur will permit you to test the question in the court in general term. Assert your right to exemption by challenge and motion, supported by affidavit.

Yours truly,

APPLEBY & EDMONSTON.

POSTSCRIPT.—In this matter, we have many additional points in your favor, which we will present for argument when the time arrives. For instance, the Interior Department has treated the dentist as a dental surgeon, and we herewith transmit a printed copy of the correspondence between the Census Bureau and Thomas B. Gunning of New York, wherein Dr. Gunning was successful in resisting the attempts of the Census Office to have dentists make a return of matters appertaining to their profession. We also transmit herewith a list of physicians and surgeons of New York wherein the name of Dr. Gunning appears as a D.D.S., Baltimore College of Dental Surgery. The State Department in 1866 appointed Dr. Gunning one of a board of surgeons to the Paris Exposition. There are many points which we have not time now to mention, such as Mayhem, and appeal of Mayhem in cases where front teeth are knocked out by assault and battery—showing the value which the common law placed upon teeth. The reported cases show the degree of responsibility to which a dentist is held, and they all proceed upon the idea that he is a surgeon and ought to be held to the same accountability. If we have an opportunity to argue the matter before the court, we can make it plainer than by writing a letter in the haste now required.

Yours truly,

APPLEBY & EDMONSTON,
Per GEORGE F. APPLEBY.

ATTACHMENT OF ARTIFICIAL CROWNS TO NATURAL ROOTS.

BY H. W. F. BUTTNER, D.D.S., NEW YORK, N. Y.

The reviving interest of the profession in this exceedingly interesting subject has caused the improvements of setting crowns and a rapid development of new processes.

In revewing the numerous methods which have been practiced and those that are at present in use, it would seem useless to enter upon this so thoroughly exhausted field and try to make an improvement. But I firmly believe, and many will agree with me, that the average result of crown and pivot operations should be more successful.

The desirable fact that a root, if properly treated and filled, can last for years, is surely worthy of the most careful attention. No effort, no skill should be spared to restore this, in a great many cases invaluable remnant, to full usefulness. We are destined to imitate nature, relieve suffering, and restore lost or crippled organs, and in none of the various duties of our profession can we accomplish a more gratifying result than in the restoration of lost crowns.

I admit that at all times there have been *some* who have recognized the value of such an operation, and exercised their greatest skill upon it; but the greater majority do not appreciate it, and prefer to dispose of it in the easiest possible manner. In the interest of the dental profession, I trust that the recent movement, which points towards a radical reconstruction of setting crowns on natural roots, will deeply interest every member, and invite them to give it the most careful attention.

An observer will not escape the fact that the many failures of pivoting operations are due to a wrong principle. Although pivots of every conceivable material have been applied, they sooner or later gave away under the pressure of mastication. The roots decay at the margin of the gum because a perfect joint between root and artificial crown is rarely obtained, and a great many split and crumble away untimely on account of being hollowed out excessively to gain room for cement, amalgam or gold to hold the artificial crown with pivot in place. The question is naturally forced upon us whether the result would not be more satisfactory if the root could be kept at full strength, the joint between root and crown made always impervious to moisture, and the pivot made a secondary means of attachment.

Few have recognized the importance of strengthening the attachment by a ring fitted around the neck of the tooth. Although this invention is by no means of recent date, it is only a short time since it has

become generally known. To protect the end of the root from decay, and to obtain a strong hold for an artificial porcelain crown, a gold band properly applied must be of the greatest benefit, providing the ring encloses the neck of the root in such a manner as to really serve as a strong attachment without the unreliable aid of cement or any plastic filling material; that it serves as well, at the least, as a perfect gold filling, absolutely moisture-tight and destined to prevent further decay of the root. These points cannot be obtained unless a method is applied which is based upon true mechanical principles.

I have for several years taken a particular interest in setting artificial crowns on natural roots. It always appeared to me that it would be an inestimable benefit to the profession to possess a method of attachment which would combine strength, firmness and durability, and preserve the exposed end of the root from further decay.

During the year 1879 I entered the New York College of Dentistry as a demonstrator, and from that time had ample opportunity to practice my method of setting crowns. Although my first operations were performed with very imperfect instruments and appliances, they have stood the test remarkably to the present time. Up to the year 1882, when I resigned my position in the college, I had performed nearly three hundred of these operations, of which two-thirds were done at the college. Since then, I have made it a specialty, and set hundreds more for prominent practitioners and in my own practice. Failures that could be attributed to imperfection of the method have never come to my knowledge, and only a few having been lost through accident, viz: breaking of porcelain face, etc. The above facts, in connection with the thorough reliability of the system, lead me to believe that I have found a device covering fully every important point in the setting of crowns.

FIG. 1.

To protect the root from decay, and to obtain a strong hold for an artificial crown, I apply a gold cap. The neck of the root is prepared by a set of instruments especially constructed for that purpose. These instruments enable the operator to obtain as nearly perfect adaptation between the gold cap and root of the tooth as can possibly be made. With reference to the upper centrals, laterals and canines, as well as the corresponding lower teeth and bicuspids, there can be nothing more favorable than the application of this method. The extension of this process to the upper bicuspids and molars, although possible, is not as advantageous.

With these instruments, a circular shoulder is turned on the neck of the root.

The alteration of the neck of the root, from an irregular cone to a cylindrical form, enables us to adapt a corresponding ring or cap. Such a cap, when fitting accurately around as well as upon the end of the root prepared by these instruments, forms an air-tight joint and consequently protects it from decay, at the same time giving the porcelain crown, when attached, a firmness which heretofore has never been obtained. The set of instruments by which the neck of the root is prepared consists of drills, reamers, and trephines. The drills (Fig. 2) are used to enlarge the root-canal for the guidance of the reamer or facing instrument and trephine. The reamers (Fig. 3) cut the surface of the root down as far as necessary. They produce a perfectly level surface and have a center-pin, which corresponds with the hole made by the drill in the center of the root, and acts as a guide. The trephine (Fig. 4) has also a center-pin, and is used to make the root cylindrical below the free margin of the gum. A set of these instruments includes different sizes of drills, with reamers and trephines corresponding in size adapted to various diameters of roots.

Fig. 2. Fig. 3. Fig. 4.

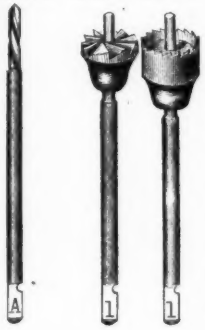
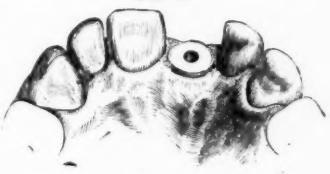


Fig. 5.

The ferrules or caps (Fig. 5) to fit roots which have been prepared by the above instruments are of gold, made by steel dies. They correspond exactly with the trephine in diameter and depth with allowance for sufficient expansion of the gold when forced on to the shoulder of the root, whereby a most perfect joint between cap and root is obtained. They have a stout central pivot which fits the hole in the root and gives increased strength and firmness.

Fig. 6.



The pulp-canal is enlarged with one of the drills selected with reference to the size of the root. A reamer corresponding in size is used with the dental engine to cut the root down to a perfect level. The trephine is applied in the same manner to give a cylindrical form to it, thus completing the shoulder (Fig. 6).

A steel wire corresponding in diameter with the drill which has been employed is now introduced into the root, projecting out about half an inch. It serves to indicate the exact direction of the root-canal. An impression cup is selected with an opening opposite the missing tooth to take an impression of the root and adjoining parts. The object of the opening is to give free transmission to the wire in the root-canal. The wire protruding through the cup and impression-material is drawn out carefully before the removal of the impression-cup, which is then removed and the wire placed in its proper position in the impression. A set of brass root-models (Fig. 7) corresponding in size with the instruments accompany them; one of these, bearing the same number as the instrument with which the root has been prepared, is now placed on the wire in the impression, and serves to represent the prepared end of the root on the model. The impression is now ready to be filled with plaster. After the cast is obtained, we find the root-model imbedded in the plaster and the wire in its center-hole. The wire is now removed and the plaster cut from around the root-model to the depth of the gold cap, which is ready to be placed upon it. A plain porcelain tooth (Fig 8), as used in plate-work, is ground hollow on the inner surface to cover the outer front wall of the cap, thus hiding the gold. Thin platinum backing is now adapted to the tooth, which is then ready to be placed in position on the model over the gold cap, and fastened thereon with hard wax. The united parts are removed carefully from the model, invested in sand and plaster, and soldered. After polishing, the cap is ready to be forced upon the root by placing a piece of wood on the cutting-edge of the tooth and driving it home with a mallet.

Fig. 7.

Fig. 8.

NOTE. Particulars regarding the sale of complete sets of the above instruments and gold caps will be shortly announced in the advertising columns of this journal.

FORMULA FOR A TOOTH WASH.

Carbolic Acid, ℥ij;
Alcohol, ℥vj;
Oil Peppermint, ℥i;
Sol. Red Aniline, gtt. v.

Five to ten drops to be used in a glass of water.—*British Journal Dental Science.*

EDITORIAL.

VIEWS ABOUT DECAY OF TEETH—OLD AND NEW.

HIPPOCRATES, about 400 B. C., drew the attention of doctors to some diseases of chest, neck and ears, the proximate causes of which he thought to be in bad teeth, and which could only be cured by extraction. Also, the seasons seemed to him to have influence over the teeth. He tries to destroy the humors stagnating and accumulated in these organs by means of certain masticatory drugs.

GALENUS, about 100 B. C., informs us, first, that the teeth have soft nerves, because they are naked bones and in union with the tongue, and the other soft portions of the oral cavity contribute to the sense of taste. From him we learn for the first time the doctrine of continual nutrition of the teeth which takes place in proportion to the wear. Two abnormal conditions may result from that fact, namely, deficiency and excess of nutrition. The former makes the teeth weaker, brittle and tender. Excess of nutrition causes a kind of inflammation similar to that in the soft tissues. No remedy exists for the first difficulty, as the deficiency in nutrition not only causes teeth to shrink, but also enlarges the pulp cavity; it is a disease of aged persons. The excess of nutrition is found more frequently in younger persons. The deficiency of nutrition one meets in some measure by astringent drugs; the excess of nutrition and the acid, stomachic juices, by bitter tonic remedies. Discolored teeth ought to be treated with drying substances.

A long night of almost absolute intellectual darkness follows during the reign of a fanatical priesthood.

By order of the German Emperor, Louis IV., in 1315, Mondini performed the first public dissection of a corpse, which had to be repeated every five years.

MONDINI, Professor of Bologna, is the restorer of anatomy; he wrote an anatomical hand-book, which for two centuries had a classical authority.

Some noteworthy investigations were made by Paul of Aegina, 636 A. D., who in time of general barbarism lived alternately in Rome and Egypt. He advises, for the preservation of the teeth, to guard against deterioration of the food from indigestion, because that causes frequent vomiting, which is very hurtful to the teeth. Therefore, he forbids the use of dry figs, very cold food, etc.

EBU SINA, or AVICENNA, about 1000 A. D., was an adherent of the

vital theory. From violently pulsating pains he diagnosticates excessive moisture at the root of the tooth. He drills into the tooth so as to empty it, and to bring the remedy immediately to the diseased spot. Narcotic remedies often ruin the teeth. Against the worms, supposed to live in carious teeth, he advises the seeds of stramonium, garlic and onion.

ALEX BENEDITTI, Professor at Padna, 1506, in enumerating the causes of caries, thinks he has to accuse the use of milk. He is the first writer who mentions the effect of quicksilver on the teeth, from internal and external use.

CAPIVACCI, 1617, cautioned against sudden changes, such as the use of warm and cold food, as nature cannot bear such sudden changes. In mercurial treatment of syphilis, the patient, as soon as an effect in the oral cavity is shown, should carry a piece of gold in the mouth, because the quicksilver adheres to the gold with its particular sympathy.

CLAUDIUS DEIDATUS, about 1600, surgeon of the Bishop of Basel, asked Hildiani, physician of Bern in 1634, what treatement he ought to employ for a nun who had the rheumatism in the right side of the head, and consequently had such violent pains that she even tried to ease them with nitric acid. Thereby she ruined all her teeth, and even the jaw bone commenced to die. A suddenly cured rash of the head seemed the first cause of the trouble, which became changed into melancholy, with digestive troubles; therefore (!) bad humors were probably the proximate cause of the fluxion.

HILDANI himself, in order to kill the nerves in carious teeth, recommends nitric or sulphuric acids, but mentions that, if repeated too often, they ruin the teeth.

MUSITANUS, Professor of Naples in 1714, says that the worms in teeth grow from their peculiar eggs which the flies and other insects deposit on the food, and these, remaining in the cavities, are hatched by the warmth of the mouth.

In 1728, PETER FANCHARD, the famous Paris dentist, the restorer of the dental art, as the French call him, writes in his works about many things which may interest the dentists. He puts himself to much trouble to prove that the worms were the cause of toothache in carious teeth and in salivary calculus, without ever having found them. He supposed all diseases of the teeth to have an internal and external cause. They first attack the external as well as the internal surface. The caries produced by external agents acts on the enamel only.

KRAÜTMAN, 1738, says: If by any increased supply of acid lymph

the teeth are corroded and become carious and soft, there is no other cure except pulling them out. The ferment of acrid lymph in the cavity would never lose its strength. Against the supposed worms in dead teeth, he uses the leaves of the "sadetree," boiled with wine, which "smiteth" them together with the bad humors. Acids and cold food are most hurtful to the teeth.

PFAFF, 1755, says the teeth are nourished by arterial blood. If this is diseased, the teeth will suffer. To explain the fact why the upper teeth become destroyed sooner than the lower, he asks: Might not the proximity of the upper jaw to the acrid humors in the nose be the cause?

OVELGRÜN, in 1771, claimed that strong tea and coffee were the cause of the prevalence of carious teeth, and that the supposed tooth worms were nothing but the seed of stramonium, used for relieving the pain.

PASCH, in 1767, considered sugar very hurtful to the teeth on account of its preparation with lime, and lime, he says, contains a peculiar corrosive acid that destroys the teeth as well as other bones. (!).

JOHN HUNTER, in 1780, said that caries of the teeth does not arise from an external injury by the dissolving action of any liquid, but it is a disease that has its origin in the teeth.

THOMAS BELL, 1835, thinks that inflammation is the cause of caries. He explains the fact that caries arises on the outside of the enamel by supposing that, being most remote from the nutrient nerves and vessels, it would be least able to resist. The name caries he considers wrong, and he calls it gangrena. Bell also disputes that the breaking down of artificial teeth is analogous to caries, and that caries is produced by external causes.

LANDERER, 1837, says that the teeth are not organized and that caries is nothing but a chemical process of decomposition by the liquids of the mouth, and proves that human teeth attached to artificial dentures sometimes show a kind of caries which is like the ordinary one.

FICINUS, 1847, explains the cause of caries by his new theory of parasites. It is a process of putrefaction which is caused by "germs" in the mouth. He supposed these "denticolæ" to originate from the joining of the so-called Buhlman's fibers, which are nothing else but the fibers of leptothrix buccalis. The process of putrefaction, started by the "denticolæ" (tooth germs), attacks first Nasmyth's membrane, which becomes brownish or black; later, he says, it affects the enamel.

KLENKS, 1850, thinks that a "phytoparasite"—protococcus den-

talis—softens and destroys the dentine and feeds on its chemical elements.

J. BRUCH, 1852, says the following are causes: 1st, hereditary; 2d, acquired; and, 3d, endemical in consequence of bad air, water, clothing and food(!!)

E. NEUMANN, 1860, indorses the vital theory. The injurious substances act on the dentine as an irritant, and as a result of it, a decomposition of the tissues follows. The fibrils in the canaliculi become inflamed, the lamels become thicker at the expense of the basis-substance, and at last the canaliculi become obliterated.

BRIDGEMAN, 1863, tries to explain caries by electro magneticism.

MAGITOT, 1867, declares caries as a mainly chemical process. He accuses the acids in the saliva and food of producing it; he also produces artificial caries by allowing acids to act on the teeth for a certain length of time.

HERZ, of Berlin, repeated the experiments of Magitot, but he could obtain nothing but a brownish-yellow coloration of the dentine, and because he could not find in the canaliculi any thing deviating from the normal, he inclines to the view that the change in the teeth in ordinary caries is due to a vital process.

LEBER and ROTTENSTEIN, 1867, by their observations of caries, found that the canaliculi were dilated and filled with leptothric bucculis. They could not detect its presence in hardened dentine and enamel. But, as the resistance of enamel and dentine is reduced by the softening action of acids, the fungi enter into the interior of the dentine and by their growth, chiefly in the dentine, may hasten still more the advancement of the process of softening and destruction than the simple action of acids could do.

WEDL, 1870, believed that the carious process arises from the sour secretion of the gums, which in children, young persons, women—particularly during pregnancy—is secreted in excess; in consequence of this increasing secretion, the carious process in young persons is more acute, while during old age it is more chronic. He has never seen the leptothric buccalis in caries, so that he thinks that they have no direct connection with the origin of the caries. In chronic cases the granules of "leptothric" are nothing but finely distributed fat in the canaliculi.

BAUME, 1877, explains caries as a chemical process produced by the influence of certain acids and sour liquids of the mouth, the use of sour fruits, wines, beverages, mineral waters, etc.

Our readers are familiar with the latest fierce fight between the acid and word-chemistry men (Watt, Tafts), inflammation-school (Drs. Abbott, Atkinson, Boedeker), and germ theory-investigators (Dr. Miller, Underwood, Clark, Stockwell).* Take your choice, gentlemen ! !—D. W.—*Extracts from the German of Dr. McSchlenker.*

IN STORE FOR DENTISTS.

We don't think we are betraying confidence in giving to the profession a part of a private letter from Dr. Jno. M. Riggs, of Hartford, Conn. We make the venture at the risk of a scolding from the Doctor, because we wish to inform the profession what is in store for them. Dr. Riggs is now engaged in writing a treatise on Pyorrhœa Alveolaris, its etiology and treatment (and who can do so better than the man for whom the disease is frequently called? and we would like to see it called by nothing else than Riggs' disease, which is simpler, easier, and in fact compliments the man who called the profession's attention to it, and has been so active in its treatment).

But to get back (the above was not written, Doctor, to prevent the scolding), Dr. R. says: "Besides, my purpose now is to give a minute history of the discovery of anæsthesia in the same volume. As I knew both Wells and Morton quite intimately, it will be conceded, I think, that much corroborative testimony as to Wells being the true discoverer will be forthcoming. Nothing but succinct affidavits have ever been published in Wells' interest, leaving much collateral evidence in my possession which will clear up the whole subject in dispute. Wells' discovery preceded Morton's claim by one year and eight and a half months. It being on the morning of the 11th of December, 1844, that the first experiment was made, after canvassing the possibilities and probabilities of success, until near midnight the previous evening, in my office. On that morning (the 11th December) one of the grandest discoveries must be written up to the credit of the dental profession, when, for lack of a patient, the discoverer submitted himself to the crucial test of success or failure (I might say life or death), by inhaling protoxide of nitrogen until total insensibility supervened and all nerve sensation was hushed to sleep, while it fell to my lot to extract a molar tooth without movement or pain to the patient.

*Those who recognize the presence of germs in decayed teeth as well proved, seem to be split up into the germ-inflammation adherents (Dr. Abbott?); acid-germ, Dr. Miller; germatony, Drs. A. & B.; while others (Dr. Stockwell, etc.,) consider the germs as most important, and the other changes as more secondary.

"Morton dates his claim for the use of sulphuric ether about the middle of September, 1846, averring that Wells' claim had lapsed by disuse. But my books show continued use up to his ether claim, and, indeed, up to a few years ago. Morton was a student of Wells and was set up in business in Boston by Wells a few years previous to the latter's discovery."

The above is quoted from the *Southern Dental Journal*, to all of which we give vent to a good, old fashioned, Methodistic "*Amen.*" Our only wonder is that Dr. Riggs has not done this before. He has in his sole possession too many facts for history to "go hence," without first having put them on record for the benefit of the future. And then, who among all the profession will not want a work on "Riggs' disease," by Riggs himself? We sincerely hope for an early issue of the work.

DR. J. L. WILLIAMS ON LIFE AND VITALITY.

In the December *Cosmos* there appeared a very interesting article by Dr. J. L. Williams on these two difficult problems. We are glad to notice that Dr. Williams himself has found that the term vitality is used very vaguely in almost all cases, but he thinks that it is defensible. Now, we always belonged to the most determined aggressors of the vague term, but we do not belong to those aggressors whose principle it is to destroy as much as they can, but rather to save as much as they can.

We are right glad and willing to accept everything acceptable. We agree perfectly with Dr. Williams in his attack on "chemical affinity;" it is nothing but another such word which is very convenient, but really does not explain anything. We cannot deny ourselves the pleasure of printing the excellent passage:

"Properties should never be mistaken for entities. Chemical affinity or gravitation does not draw atoms or aggregations of atoms together. They are only abstract expressions by which we indicate something of the *qualitative* relationships of matter. Herein lies the error of the materialist; he is constantly mistaking the *method* by which matter under certain conditions acts, for the *cause* of the action; and he persistently refuses to recognize the fact that man's consciousness is related to the phenomena of life as exhibited in matter by a very narrow scale of three degrees,—touch, sound, and sight; the other senses being only modifications of the first. A low degree of motion we call the sense of touch; that motion increased, our

consciousness recognizes a new quality which it calls sound; still further augmented, it speaks a second time through the sense of touch as heat; a more intense action reaches consciousness as light, and then, as the brain is unable to report more than 800 billions of vibrations in a second, the activities of matter pass beyond the scope of our consciousness surrounded by a halo of intense violet light. Above and below this narrow scale roll the infinite tides of life. Inasmuch, then, as man knows so little of the purely material aspects of life, it behooves him to be exceedingly careful in making statements which imply that he has taken into the account all of the qualifying conditions."

We notice an immense advance in the position of Dr. Williams. He expresses his ideas in a much clearer and preciser form, and we are able not only to get at what he means but also to largely agree with him. We fail, however, to understand what he means in the sentence: "Any theory of the origin of any form of organic existence which fails to recognize the subjective conditions of life must end in darkness and confusion." We have to accept sentences like: "Every careful observer knows that there is something in an organism which sets at defiance and sometimes wholly frustrates what we call chemical affinities," if we accept "chemical affinities," but personally we accept that term as little as vital force. We consider the author to be one of the most assiduous thinkers on the subject of vitality, only he has a slight inclination to what might be called the reverential and pious aspect of the whole question, which, to our conception of stand-points, is historical and already passing away in the natural course of the brain-development of man. In moments of poetical enthusiasm we also feel inclined to admire the grand and marvelous adaptation of organs to most complex ends by simple contrivances, but while there are hundreds of points which arouse our astonishment, there are hundreds of other points which fill us with disgust. The whole sentimental aspect of the subject is evenly divided between the admirable and the disgusting, and we can not do anything else but leave it out in scientific discussions of the matter. We try to explain and explain until we are compelled to stop, and then we say candidly, I don't know! But to say, I do not know, before that is needed, would be indolence. We can accept the term vitality as the sum total of all forces, but not in the meaning of an entity in itself; vitality is a resultant, and the efforts of all investigators and philosophers since the commencement of the world were directed towards the decomposion of the resultant into its components; from the writer of the Pentateuch down to Hæckel all

philosophers have tried to solve the problem. The first one got only two components, body and soul. The latter has recognized the principle that every organ, nay, every speck of the human system, has to be analyzed, explained and treated in a most thorough, dissecting, searching manner.

While in a general way we can give two large components of the resultant, called life: internal structure and external circumstances, each of these components consists of innumerable small components, and the more we analyze each, the nearer we are to a solution of the given problem. A steam engine appears a unit to the uncultivated savage; to one a little more educated, it appears a simple machine—"nothing but boiler and wheels"—while to the builder, it is a problem of great complicatedness; to the scientist, who tries to give an exact theory of it, though he may know ever so many details, it is a problem which he can only approach, but never absolutely figure out. The very same holds good with vital forces. The higher we stand in our education, the more will we be able to explain life; the more will we decompose it into factors; the more will we understand it without ever reaching an absolute solution of the problem.

To carry our comparison still further, Dr. Williams appears to us as the analyzing artist, who analyzes the problem from principles of the beautiful and admirable rather than of the purely mechanical and mathematical, which latter stand-point we prefer. Both may get excellent points in their conception of the subject, and yet experience great difficulty to agree and understand each other. M.

DR. LESTER CURTIS AND HIS FIGURES.

In the last excellent article of Dr. Lester Curtis on Some Fallacies concerning the Bioplasson Theory, he attacks very much the size of the drawings of Heitzmann's reticulum in his work. This seems to us rather unfair. To tell the size of the meshes, as determined by the naked eye, is just like the problem to tell what is the apparent size of the moon: some say as large as a hat, others one foot in diameter, a cart wheel, etc. If we attempt to draw the net-work the size we really see it, what would we get practically?—muddy drawings, too small to be clearly cut and reproduced; we are forced to magnify without changing the proportion by our magnifying. If we look through a telescope and observe the starry sky during the night in the neighborhood of the milky-way, we see an immense number of stars

in the field of the instrument; but if we should attempt to draw them with apparent sizes and interstices, the practical execution would meet with such difficulty that from simple necessity we have to adopt a different scale. We see stars that have less than $\frac{1}{100}$ of a second in diameter, even in the largest magnifying glass. Will Dr. Curtis advocate that the drawing of such dots would be a deception, because we would have to make the stars, say as large as the finest point we can print, which is still at least fifteen seconds or 1,500 times larger than the stars seen. The spaces between two stars which we can distinguish are less than one second. We can simply not represent in print and in drawings distances as small as these without enlarging, and what holds good in our seeing with the telescope, holds also good with the microscope; and all such figuring from drawings, that from the very practical necessity of the cause, have to be enlarged, seems to us, if we may be permitted to use the expression, sophistical. When Dr. Curtis figures the size of lines which he allows as possible to be seen to $\frac{1}{143528}$ of an inch, and thinks that while we may see these lines, we might not see, say $\frac{1}{143529}$ of an inch, his figuring becomes perfectly untenable. All these prophets who tell us what we will and can see, are false prophets. If we magnify with lenses properly and perfectly made, we may apply rather the following calculation: We can see a piece of wire $\frac{1}{20}$ of a millimeter thick without difficulty with the naked eye. If we apply a microscope with 2,000 magnifying power and sharp defining power, both of which are practically feasible, we get $\frac{1}{1000000}$ of an inch; hence, about lines $\frac{1}{7}$ the thickness of the lines which Dr. Curtis declares to be our limits allowed to us by him. Furthermore, we may trust that Dr. Heitzmann knows as well as Dr. Curtis when a lens is out of adjustment, as when it is in adjustment, and—not taking anything else into consideration—if of two observers, both we may suppose equally good, the one sees more than the other, and many others also see more than that one other person, there can be but little doubt for us in which line to decide. One good point seems to us to be brought out by Dr. Curtis in his last passage where he maintains that he has shown that some of the structures said to show the net-work were so altered by chemicals as to be useless for any such purposes. Microscopists are a trifle inclined to abuse their specimens with too strong chemicals like chromic acid, chloride of gold, nitrate of silver, etc. They show up something, but not quite the natural thing.

IN SYMPATHY.

The many friends of Dr. L. C. Taylor and wife, of Hartford, Ct., will be pained to learn that they have suffered the loss of an only son, a bright and manly little fellow of nearly seven years, who died February 25, of scarlet fever. Fathers and mothers who have had and lost only know how much of their own lives is involved in the going hence of one of these little ones.

If any of our new subscribers want Volume One of this Journal, or any part thereof, we can supply them to a limited extent.

We hear it whispered—perhaps by the winds—that a new work on Operative Dentistry is among the near possibilities, if not probabilities, by Dr. L. D. Shepard, of Boston, late Professor of Operative Dentistry in the Harvard Dental College. We have no hint of this kind from the Doctor himself, but have been informed that, in response to numerous importunities on the part of prominent members of the profession to make such use of a large amount of matter in his possession, he has the question under consideration, with at least some prospect of complying therewith.

There are few men better equipped for the preparation of a work on this branch of dentistry, and the reputation of Dr. S. as an operator would ensure its prompt popularity. A simple remark by one of the oldest men in the profession is to the point: "If Dr. Shepard writes a work on Operative Dentistry, it will be a good one." That there is a call for a text-book on Operative Dentistry that shall be "up to the times" and of some practical importance to the general operator, there can be little doubt, and it is to be hoped that the right man will soon undertake to meet this deficiency.

Under "Societies" may be found a notice of a joint meeting of the Massachusetts and the Connecticut Valley Dental Societies, to be held in Springfield, Mass., June next. Measures are in progress which cannot fail of making this one of the most important meetings that have ever been held. Particulars will be given at an early date. In the meantime, let the "appointment books" of every New England dentist, at least, be arranged with the dates of this meeting in view.

Dr. Thomas Fillebrown, of Portland, Me., has been appointed Professor of Operative Dentistry in the Harvard Dental College, to fill the vacancy caused by the resignation of Dr. L. D. Shepard some months since. Prof. Fillebrown has for several years been one of the most active and progressive men in the profession, a leading man in several local societies, one of the prominent workers and officers of the American Dental Association, and at present the President of the New England Dental Society. Universally esteemed by the profession, a fluent speaker, possessing good judgment and marked abilities as an operator. In short, an excellent appointment.

Probably all dentists have noticed the fine teeth of Jews in general, but have they noticed that the teeth of Jews are exactly in accordance with those of the population in which they live? In Russia they are excellent, and woe to the dentist who would try to get a paying practice in a Russian village of only 20,000 inhabitants. In Germany they are of middling quality, while in Switzerland they are as bad as those of the rest of the population. The Jew of the Orient has beautiful yellowish teeth, small, with long roots.

Probably the worst teeth are in the possession of the Swiss of those living in what is termed the German cantons. Switzerland is about seven-tenths German, one-tenth Italian, and two-tenths French, and along the borders of the lake of Zurich and Constance, we can almost challenge any one to find a mouth with more than half of its teeth. What is the cause? The mixing of races—Celts, Goths, Alemans and Germans; or the food, or drink, or habits of uncleanliness?

J. K. Knight, D.D.S., of Cambridge, Mass., was chosen valedictorian by the graduating class of the Boston Dental College, and delivered an interesting address at the closing exercises of the college there, on March 7th.

A valuable dental practice is offered for sale in our advertising pages.

OPERATING TABLE AND LABORATORY.

A REFLECTOR FOR ILLUMINATING THE MOUTH.

Something has been said recently about a new application of electricity in dental surgery. A small electric lamp is inserted in the mouth and lights up the caverns of decayed teeth. In this connection it may be stated that a reflector for illuminating the mouth, which answers the same purpose and much more simply and satisfactorily, has been devised. It consists simply of a glass bulb, or globe fixed to a standard, and which is filled with distilled water and a solution of sulphate of copper. Behind the globe is an adjustable reflector, between which and the globe is a gas jet. The simple adjustment of the reflector behind the gas jet throws the light in the desired direction. Turned into the mouth and again reflected by the dentist's small glass, the very strong rays of light reveal the minutest defects. Its convenience as compared with that of an electrical apparatus thrust into the mouth, to say nothing of the absence of annoyance to the patient, can be appreciated. The reflector spoken of is manufactured in London, and two only are said to be in use in this country, one of which is in the office of a Chicago dentist.—*The Sanitary News.*

TO REPAIR SLIPPING DISKS.

Users of the sand-paper or other disks, mounted on the ordinary screw mandrel, are doubtless troubled at times to prevent their slipping. The slipping is a result either of the wear or careless make of the mandrel, the center of the screw head coming to a bearing first instead of the periphery. To remedy, take a sharp chisel and, while the mandrel is revolving—without the screw head—pare down the center so that the end will be somewhat dishing. See that the screw will turn *quite in* and freely, without the disk, and there will be no further trouble, at least, till the operation needs repeating.

PROFESSIONAL ETHICS.

We had thought of writing a few lines on the above subject, but perhaps it is not best. The whole subject may be summed up in a few words. Any man who has a reasonable degree of self-respect will never *need* such laws to prevent either self or professional disgrace. Without self-respect, it is impossible to foretell what any person may be guilty of doing. We doubt the possibility of restraining such a one by means of a *code*.

SULPHURIC ACID IN AMALGAMS.

If filings of metals remain exposed to the air for any length of time an amalgamization takes place much slower. As mercury is an easily oxidized element, it is necessary to keep it from contact with the air as much as possible if it is desirable that after hardening a uniform texture should be obtained, and that the density of the filing should correspond with the metal filings. If a drop or less of sulphuric acid be added while rubbing the mercury and filings together, union is accomplished easier, as the oxide unites with the acid; and if the amalgam is afterwards washed in water, every part of the acid is removed, and a good filing material obtained.—*Zahntechnische Reform.*

Editors New England Journal:

The particulars of a case, to *me* remarkable, I send you to use as you see fit:

Last July I extracted all, as I supposed, of the remaining teeth and roots, some six or seven, from the upper jaw of Mrs. N——, aged sixty-eight. November following, the mouth apparently in proper condition, I inserted a full upper denture, which was worn with satisfaction until about Christmas time, when a swelling came in the roof of the mouth, which subsided on the appearance of a hard substance at the bottom of a shallow sinas at the location of the right superior canine. On attempting to remove the supposed *root*, an unusually long, sound canine was extracted, with much difficulty, only imperfect in the point of the cusp being absent, not decayed, but apparently undeveloped from pressure upon the apex of an adjoining tooth. No knowledge of its previous absence could be recalled.

Yours sincerely,

J. W. KEYES.

COLORED COLLODION.

Colored collodion is one of the most convenient articles for laboratory use that I know of. Coat your impressions with it, and the ease with which you may separate it from the model will greatly please you. It never freezes and is always ready, provided you keep on hand a bottle of ether to thin it with. To prepare colored collodian, dissolve a quantity of red aniline in alcohol, and from this use enough to color the collodian, which you can procure from any drug store.

J. G. H.

BIBLIOGRAPHICAL.

MRS. PABKE'S ONE HUNDRED RECIPES FOR DISHES BOTH WHOLESOME AND PALATABLE. Springfield, Mass. M. C. Stebbins & Co.

"These recipes discard the use of baking-powders, saleratus and soda." Perhaps few people know the difference of the action of yeast and of baking-powders. It is true, both substances raise the bread by evolving carbonic acid, but beyond that, the resemblance ceases. The yeast plant produces the carbonic acid from constituents of the flour, thereby changing the latter itself, transforming a large part into dextrine and butyric, etc., acids, which are much easier digestible than flour itself, while the soda does not prepare the flour for digestion, and throws the whole work on the system. Mrs. Pabke, who herself is a cook of great skill, has picked out many national dishes from the rich national agglomeration, called Austria, and we doubt if there is not a great number among them that will prove a real blessing to dyspeptic martyrs of the mashed-potato, soda-tea-cake and white soda-bread. But the dish, called "paprika" (on page 21), would seem to us rather strong, using "a pint of red pepper" for a few chickens. As we are informed by best authority, it ought to read, "a pinch of red pepper." This is the only error of consequence in the book. For originality and ingenuity of some of the dishes, the book will be held in high esteem by people of slightly epicurian fancies, and for dyspeptic ones we would recommend meals after these recipes. The price is very low, only 25 cts. It is neatly printed, free from any advertising dodge; not a single patent-article is recommended or mentioned in the book.

ADDRESS DELIVERED BEFORE THE AMERICAN ACADEMY OF DENTAL SCIENCE, AT THEIR FIFTEENTH ANNUAL MEETING. Boston, Oct. 25, 1882. By Frank Abbot, M. D.

An oratorical effort of rare merits. He reviews the history of dentistry and shows that also in this branch the mediæval night extinguished all the progress of the Greeks and Romans for over a thousand years. The only ones fit to survive in those times were warriors, monks and "muckers;" even the free-minded emperor, Frederick II. (between 1220–1255), could do but little in that intellectual night. Dr. Abbot has the sympathy of all men, wishing the best of the profession, if he urges "more light" and education; and only from this stand-point can we agree with his favorite idea that every dentist ought to graduate as an M. D.

ELECTRISCHE VORGÄNGE IM MUNDE (ELECTRICAL PROCESSES IN THE MOUTH). By Dr. Willoughby Miller. Berlin, Gy.

This is a careful little essay, appearing in pamphlet form. It embodies valuable experiments about the conductive power for electricity, of dry and moist dentine. We have given the results in our last number.

MINUTE ANATOMY OF THE TEETH, by Dr. Carl Heitzmann, and MINUTE ANATOMY, ETC., OF THE DENTAL PULP, by Dr. C. F. W. Bodecker. Reprint from the Dental Cosmos.

A paper read before the New York Odontological Society, February 1882. The first paper is by the master himself, and we have simply to read and to accept. The second paper of one of his ablest coworkers, and perhaps the best specialist in dental microscopy, is really admirable. The fine cuts alone, showing immense improvements over the childish cuts of only ten to fifteen years ago, are worth "millions" to an investigating dentist. How small a thing is a tooth, and how immense is the science of such a little block! It has been said that about every word in the Bible a book has been written, and we think humanity has done very much, but millions of books will still be written and will have to be known till science shows signs of exhaustion. Will a dentist who claims to be abreast with his fellow workers in his own department, dare to do so without studying those fine specimens of clear and sharp observation?

UNTERSUCHUNGEN ÜBER DAS WESEN DER ZAHNVERDERBNISS (Investigations about the Nature of Dental Caries), by M. SCHLENKER, of St. Gallen.

A voluminous treatise of 160 pages, which we will consider more fully in our next number. We are indebted to Dr. Schlenker for an excellent history of the views about caries, which we print in this number.

TAFT'S OPERATIVE DENTISTRY. Fourth Edition. Revised, with one hundred and thirty-six illustrations. Philadelphia. P. Blakiston, Son & Co. Price, cloth, $4.25; sheep, $5.00. A book of 509 pages.

The first edition of this work was published in 1861. Since that time it has been a text-book in many of our dental colleges. The author says: "It has been in many instances a somewhat difficult task to decide as to the rejection of some methods, instruments and appliances. It is not always easy to determine upon the merits of the new as compared with the old and tried. Caution and perhaps wis-

dom dictates that those things that have been thoroughly tested and approved should not be hastily thrown aside for those of recent production, without good evidence of improvement." "Quite a number of instruments and appliances have been dropped from the work, and only those retained that are valuable and efficient." In the appendix, one section is devoted to Watt's Chemical Theory of Dental Caries; one to Dr. Corydon Palmer's Plugging Instruments; one to Mallets, and one to Dr. Louis Jack's Matrices for Proximal Fillings.

That a fourth edition of this work is demanded, is evidence that teachers in dental colleges deem it better for the use of students than any work yet published.

SOCIETIES.

The Massachusetts Dental Society and the Connecticut Valley Dental Society hold a three days joint convention at Springfield, Mass., June 6, 7 and 8. In our May number we will give full particulars. It is proposed to make this meeting one of the best that has ever been held in New England.

The Alabama State Dental Society meets in Montgomery on the second Tuesday in April.

The Georgia Dental Society will meet in Atlanta the second Tuesday in May.

The Kentucky Dental Association holds its next session on the first Tuesday in June, at Louisville.

Members of the profession who purpose appearing before the Board of Censors for examination for the diploma of this society and the degree of "M.D. S.," should immediately communicate their intention to Dr. Frank French, Secretary of the Board, at Rochester, and report to him personally the morning of May 8th, 1883, at the Delavan House, Albany. The examinations will begin at 10 A. M., and continue throughout the day, or until the list is exhausted. No examinations will be held during the session of the society.

J. EDW. LINE, Secretary.

The St. Louis Dental Society meets first Tuesday in each month, excepting August and September, at 204 North 5th Street, St. Louis, Mo.